



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 825 794 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
12.01.2000 Bulletin 2000/02

(51) Int Cl.7: **H04Q 7/36, H04Q 7/38**

(43) Date of publication A2:
25.02.1998 Bulletin 1998/09

(21) Application number: **97306132.8**

(22) Date of filing: **12.08.1997**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**

(30) Priority: **21.08.1996 US 697159**

(71) Applicant: **LUCENT TECHNOLOGIES INC.**
Murray Hill, New Jersey 07974-0636 (US)

(72) Inventors:
• **Agrawal, Prathima**
New Providence, New Jersey 07974 (US)

• **Shivakumar, Narayanan**
Stanford, California 94305 (US)
• **Narendran, Balakrishnan**
New Providence, New Jersey 07974 (US)

(74) Representative:
Buckley, Christopher Simon Thirsk
Lucent Technologies (UK) Ltd,
5 Mornington Road
Woodford Green, Essex IG8 0TU (GB)

(54) **A network flow framework for online dynamic channel allocation**

(57) The invention relates to a dynamic channel allocation system for a mobile communication system wherein mobile units communicate with the base station on allotted channels. The channel allocations are determined according to a framework of network flows including flow paths with nodes representing active mobile

units, base stations and channels used for communication between active mobile units and their respective base stations. A new call from a mobile unit is added by finding the shortest available augmenting path for the added unit. The edges between nodes can include cost and capacity factors which can be used to determine desirable reconfigurations for the network.

EP 0 825 794 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 6132

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	<p>KATZELA I ET AL: "CHANNEL ASSIGNMENT SCHEMES FOR CELLULAR MOBILE TELECOMMUNICATION SYSTEMS: A COMPREHENSIVE SURVEY"</p> <p>IEEE PERSONAL COMMUNICATIONS, US, IEEE COMMUNICATIONS SOCIETY, vol. 3, no. 3, June 1996 (1996-06), page 10-31 XP000593925</p> <p>ISSN: 1070-9916</p> <p>* page 15, left-hand column, line 1 - page 17, right-hand column, line 14; table 8 *</p> <p>-----</p>	1,7,12,15	<p>H04Q7/36</p> <p>H04Q7/38</p>
			<p>TECHNICAL FIELDS SEARCHED (Int.Cl.6)</p> <p>H04Q</p>
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		22 November 1999	Behringer, L.V.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p> <p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 82 (P4/C01)